CHAPTER 6
THE ESTABLISHMENT, IMPLEMENTATION AND TERMINATION OF INSTITUTIONAL CONTROLS

6-1. Introduction. This chapter discusses the requirements for establishing, implementing and terminating an institutional control program at an OE site.

6-2. Establishing Institutional Controls.

a. The following issues should be considered when establishing an institutional control program: preparation of an institutional control plan; preparation of support agreements; establishment of funding for the implementation and maintenance of the institutional control program; and provision of an appropriate level of public notice regarding the establishment of the institutional control program.

b. Preparing an Institutional Control Plan.

(1) An institutional control plan should be prepared when an institutional control program is being formulated for a site. The institutional control plan is normally prepared during the EE/CA process. The plan should be a brief summary of the major issues and objectives that the institutional controls have been designed to address. Issues covered in the plan should include:

(a) General description of site boundaries;

(b) Specific institutional controls that will be used on the site;

(c) How the proposed institutional controls will reduce the risk of OE exposure;

(d) What local, state, Federal Government, or private agencies, or individuals are involved in the implementation, administration, enforcement, and/or maintenance of the institutional controls;

(e) Identification of short-term and long-term costs and funding sources;

(f) Schedule for implementation and inspection of the institutional controls;

(g) How long the institutional controls will have to remain in place; and

(h) Procedures for modification or termination of the institutional controls.

(2) The institutional control plan should be reviewed by all parties that will be involved in implementing or maintaining the institutional controls. It is important that all parties with approval

authority be included in the review process. In addition, local community groups and outside state agencies that may not be directly involved in the institutional control program, but may have an interest in the program, should also be copied on the final plan.

c. Preparing Support Agreements.

(1) Detailed support agreements are an essential part of an effective institutional control program. Upon completion of the institutional control plan, specific support agreements should be prepared between USACE and the respective supporting agencies that will be involved in the implementation or maintenance of the institutional controls. The support agreement must detail the specific responsibilities for items including administration, inspection, maintenance, funding, and enforcement that will be required from each supporting agency. The appropriate vehicle and the specific format and requirements for the preparation of a support agreement will depend on site specific characteristics and the nature of the agency that is providing the assistance.

(2) If DOD is to retain title to a piece of OE-contaminated property as part of an active military installation (e.g., Aberdeen Proving Ground), the institutional control program may also be recorded in the Base Master Plan (BMP). The BMP establishes land uses similar to a municipal zoning plan and is utilized in the evaluation of land use decisions and for project planning. Prior to using the BMP as a means to establish an institutional control program at a base, it should be confirmed that the specific installation BMP can be used for this purpose and that the BMP system is adequate to ensure adherence to the proposed institutional control program.

(3) A Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU) between the DOD installation, USACE, and the appropriate regulatory agencies may also be used to record the details of an institutional control program.

(4) An institutional control program shall be recorded as a response action in a Remedial Action Plan (RAP) or Record of Decision (ROD). For example, at Aberdeen Proving Ground, Maryland, the institutional control plan was included in the ROD for the site; thereby, making the institutional control legally enforceable. In addition, by recording the institutional control in the ROD, the Army becomes legally responsible for complying with, funding, and implementing the plan.

(5) Regardless of which instrument is used to implement an institutional control program, the institutional control plan should include a description of each institutional control, the purpose for the control, specific conduct and activities that are prohibited, requirements for implementation of the control, and procedures to take if the land use plans change. References to applicable site characterization documents (e.g., Remedial Investigation/Feasibility Study, EE/CA, ROD, Action Memorandum, etc.) should also be included. The institutional control plan should include a land survey

of the site boundaries, and in the case of sites at active installations, the boundaries should be added to appropriate base maps.

d. Funding the Implementation and Maintenance of the Institutional Control Program. As with any remedial alternative, funding is a key issue in the implementation of an institutional control program. USACE must commit to programming funding for both the implementation year and the out-years to ensure that funds are available to implement and maintain the proposed institutional control program.

(1) Determination of Funding Requirements. In evaluating the implementation of an institutional control program at a site, the funding requirements for all aspects of the program must be considered upfront. The relative costs of different combinations of institutional controls and their applicability to site-specific conditions should be evaluated. The land use matrix and other tools introduced in Chapter 5 for use in the assessment and comparison of remedial alternatives may be helpful.

(2) Alternative Solutions for Fund Site Management. Appendix D contains a listing of programs that might be used as part of an institutional control program at an OE-contaminated site. Additional sources of funding may be available through these programs, as was the case when the Sikes Act was used at Aberdeen Proving Ground in Maryland.

e. Providing Public Notice of the Proposed Institutional Control Program.

(1) The USACE Real Estate Handbook (ER 405-1-12) requires that when land contaminated with OE or toxic agents is released or transferred, the general public must be notified regarding the possible presence of and inherent danger of handling such contaminants. This notice may take various forms such as newspaper articles or advertisements, television or radio announcements, or posting notice at the site. The notice should include not only the risks posed by the site, but also instructions on how to report the discovery of an OE object or any injuries suffered as a result of an explosion or exposure to toxic agents. The notice should also include the name and telephone number of the responsible agency and a warning that any incidents should be reported immediately. Local government agencies, such as local law enforcement, whose cooperation should be secured in the development of the institutional control program, can provide assistance in the timely reporting of such a discovery or accident.

(2) In addition to the general public notice described above, an effort should also be made to notify and inform local scrap dealers about the potential presence and the dangers of OE objects. This is due to the fact that many OE accidents are the result of explosive objects being removed from a property and sold to the local scrap dealer. Scrap dealers should be asked to refuse to buy military scrap from private parties unless it has been processed in accordance with OE MCX policy in order to avoid such accidents.

6-3. Implementing an Institutional Control Program.

a. Legal Framework and Regulatory Programs.

(1) Federal, state, and local governments play a key role in the implementation of institutional control programs at OE-contaminated sites. These agencies may use existing programs that they already administer to implement an institutional control program. By using such programs, the Federal, state, and/or local agency can show the legal authority and jurisdiction necessary to implement the proposed institutional control.

(2) In general, Federal and state regulatory agencies have direct legal authority to protect human health and the environment, prevent releases of contaminants, and control activities at contaminated sites through the statutory authority provided under CERCLA and RCRA. In a similar manner, state and local government agencies typically have authority and jurisdiction in the implementation of land use zoning and land use plans, the issuance of building permits, the enforcement of public health programs, and the enforcement of statewide environmental programs.

b. Deed Language for Proprietary Controls and Other Commitments.

(1) Ensuring that the correct deed language is used to implement a legal mechanism, such as a deed restriction, is critical to the success of the restriction. The specific language necessary to make the restriction enforceable within the jurisdiction often varies depending on the state in which the site is located. An example of deed language to establish a reversionary interest is included in Appendix G. This example is provided for illustrative purposes only and should not be used without appropriate legal review. The appropriate legal language will vary depending on site specific conditions and state and local law.

(2) The American Society of Testing and Materials Risk Based Cleanup and Assessment Guidelines outline four general conditions that must be met to make a deed restriction binding and enforceable. They include:

(a) The restriction must be in writing.

(b) The duration of the restriction must be specified. For the restriction to be held in perpetuity the phrase “runs with the land” is commonly used.

(c) For enforcement purposes, parties must have privity of estate (i.e., a real relationship to the land). Therefore, the state or other government entity must be the buyer or seller in order to enforce the

deed restriction. An entity that is not privy to the land may have the power to enforce a deed restriction if, at the time of the purchase, the buyer was made aware of this and it is written in the deed.

(d) The restriction must "touch and concern the land". This means that the land or the use of the land must be the focus of the restriction. Generally, these types of restrictions devalue the owners legal interest in the land in some way. Promises that are personal in nature and only concern human activities on the land are least likely to be enforceable.

(3) More specifically, land transfer documents for sites that may contain OE should address the following issues:

(a) A stipulation of the permissible end uses consistent with the clearance depth and a statement that any future use that is inconsistent with these use restrictions will present explosive hazards. If the clearance depth was less than the DDESB default for commercial/residential/ utility construction activity (see Table 3.2), the land transfer documents must include a requirement to notify USACE before any commercial/residential/utility construction activity. Transfer documents should also require that no excavation be accomplished until USACE has either granted permission to excavate or has come to the site to perform nonintrusive geophysical surveys and/or remediate the property prior to or in conjunction with excavation.

(b) If an OE clearance depth was determined using site specific information or penetration data, the deed should prohibit soil disturbance below the OE clearance depth.

(c) If the clearance depth was based on DDESB defaults, the future land use will be restricted to that depth commensurate with the chosen default depth (see paragraph 3-5).

(d) The transfer documents will detail the amount and type of known or suspected OE, describe the OE response actions taken during the investigatory and remedial stages of the project, and, if applicable, provide an estimate of the type and amount of OE remaining on the site.

(e) If OE is believed to be located above the frost line, but below the removal depth, the land transfer documents will provide the USACE the right of access to the property in order to conduct periodic surveys. The length of time that this right of access will be necessary will be determined by USACE based on site specific information.

c. Records and Community Involvement.

(1) Army policy requires that properties slated to become inactive or closed are to have all records relating to OE contamination of the property maintained in perpetuity. When accountability and control of Army real property that contains OE is transferred to another DOD component or Federal agency, that action will be accompanied by a transfer of all records relating to the OE contamination of the property. These records will be permanently maintained by the receiving agency.

(2) The information listed in Paragraph 6-3(b)(3) above must be included with the AR 405-90, Disposal of Real Estate, report of excess to ensure entry in the permanent land records of the civil jurisdiction in which the property is located.

(3) In addition, when an OE-contaminated property is transferred between government agencies, a MOA will be negotiated between the USACE and the receiving Federal agency. The MOA will define the area of concern, identify any specific land use restrictions of the property, and outline any legal or engineering controls that have been established on the property.

(4) The release of OE-contaminated properties currently owned by DOD to owners outside of DOD is generally unacceptable. If, however, such a transfer is considered, an explosives safety submission must be prepared and submitted to the Department of Defense Explosives Safety Board (DDESB). The explosives safety submission will refer to sufficient supporting documentation (e.g., administrative record, risk assessment, site investigations, and other site-specific documentation) in order for the DDESB to make an informed decision on the viability of the proposed institutional controls for a subject site.

(5) The importance of providing public notice of an institutional control program and including the community in the development of the plan has been stressed throughout this report. An organized community involvement program that is used throughout the development and implementation of institutional controls will keep local government representatives and the citizenry informed. By keeping these groups informed, feedback may be obtained which may be helpful in developing an effective institutional control program. Such feedback also serves to foster goodwill between DOD and the community. A complete record must be maintained of all community involvement activities performed during the development and implementation of an institutional control program. These records will be maintained along with the other OE site investigation and remediation records prepared for the property.

d. Appendix H contains a checklist addressing issues related to implementing institutional controls.

6-4. Maintenance of an Institutional Control Program. This section provides a general discussion of some generic operations and maintenance considerations for an institutional control program.

a. Maintaining the Effectiveness of Institutional Controls.

(1) Setting up evaluation criteria. The institutional control plan should include the development of site specific criteria that will be used to ascertain whether the program is achieving the specified goals. The criteria may include:

(a) Is the current land use appropriate or in compliance with the institutional control program?

(b) Are engineering controls performing as intended? For example, if fences are used as a barrier to access, an evaluation may include review of trespassing occurrences and how they were handled, as well as evaluation of the physical condition of the fence (e.g., are there any holes or gaps in the fencing). If signs are used, an evaluation should include a review of whether the signs are generally heeded or ignored, and whether the signs are easy to understand and visible.

(c) Is the public notice and education component of the institutional control program reaching those at risk? This may be evaluated by reviewing attendance at public education meetings, gauging public response to the controls, conducting random interviews throughout the community, etc.

(2) Developing procedures to coordinate the activities of the responsible parties. The institutional control plan should address the responsibilities of the various parties involved for maintaining the effectiveness of the institutional control plan. These procedures should include the frequency and types of inspections; reporting requirements for any inspections made; reporting of any noted violations; and, enforcement responsibilities.

b. Resources. The resources available for maintenance activities should be considered when comparing different institutional controls that may be implemented at a site. Resources may be available at the Federal, state, and/or local level. The available resources will vary from site to site. For example, one locality may have a strong, well developed and administered local planning agency or building permitting agency, making zoning and permitting restrictions more attractive and feasible as institutional controls in that location. On the other hand, some areas may have very little in the way of local government resources that can be drawn upon to help maintain an institutional control program. The level of interest and cooperation from any potential agencies must be considered before obligating these agencies to assist in the maintenance of institutional controls.

c. Enforcement Authorities. The enforcement authority will depend on the type(s) of institutional control implemented at a site as well as the legal authority held by the prospective enforcement agency.

(1) Zoning. Depending on the site location, the state and/or the local government may have the authority to develop, modify, and enforce existing zoning ordinances. However, zoning ordinances have mixed legal authority, depending on the jurisdiction, and are often modified over time. This should be considered, therefore, before using zoning ordinances as an institutional control.

(2) Property Laws. The effectiveness of property laws as part of an institutional control program also varies greatly between states. Depending on the location and on the type of agreements pertaining to a site, Federal, state and local governments, as well as private citizens, may have the right to enforce or seek enforcement of an institutional control through common property laws. For example, in the case of restrictive covenants and easements, the parties to the agreement have the right to seek enforcement if one party violates the conditions of the agreement. The parties to these agreements may include Federal, state and local government agencies, private organizations, or private citizens.

(3) Permitting. Establishing an institutional control through a permitting program can be an effective component of an overall institutional control program. Enforcement of permitting programs lies with the administering agency. For example, building permits are generally administered by the local government and agencies of the local government that have been established to administer and enforce such programs.

(4) Other Laws or Ordinances. Depending on the site, other agencies may have enforcement authority. For example, the United States Fish and Wildlife Service has authority at Aberdeen Proving Ground, Maryland where OE-contaminated areas were designated as Natural Resource Management Areas as part of an institutional control program.

d. Coordination of Long-Term Responsibilities. The support agreement developed for the site should include a discussion and assignment of long-term administration, maintenance, funding, and enforcement authority.

e. Funding. The operation and maintenance activities necessary as part of an institutional control program will require on-going funding. The amount of funding required will vary on a site-by-site basis and will depend on many factors including the type(s) of institutional control selected, the location of the site, and the associated level of cooperation and support from local agencies. Negotiations with the local administering agency will be necessary to determine the exact level of funding. The specific funding to be given to an agency should be included in the institutional control plan. USACE districts will be responsible for planning and programming the necessary funding for the operation and maintenance of the institutional control program.

f. Monitoring/Inspection Requirements.

(1) In order for an institutional control to be effective in protecting the public from residual contamination at a site, periodic monitoring and inspection activities must be a part of the institutional control program. The institutional control plan should address the need to maintain access to a property for monitoring and inspection requirements. This may be accomplished through the use of an easement. Appendix G contains sample language for such an easement. Access to a site could also be accomplished under a right-of-entry agreement, however such an agreement is binding only on the current landowner and may be voided if the property is sold. In contrast, a properly executed easement will run with the land, ensuring access to the property for the extent of long-term monitoring required by institutional controls.

(2) Type of Inspections. Legal mechanisms such as deed restrictions, permitting programs, zoning ordinances, and siting restrictions will require periodic site visits to ensure that the controls are being obeyed. The exact content of these site visits will vary depending on site specific characteristics and restrictions, but may entail visual observation of land use and interviews with property owners, neighbors, and users. Such interviews should ascertain whether the current use(s) are appropriate for the site's conditions relative to the residual contamination and whether the land use is in compliance with the institutional control program. Engineering controls such as signs, fences, and soil caps will require similar site visits which, in addition to an assessment of land use and site activities, will also include inspection of the integrity of the physical control.

(3) Areas to be Inspected. Any areas containing residual contamination which is being controlled by an institutional control should be included in a site inspection. It may also be appropriate to observe surrounding land use during the inspection to evaluate whether the assumptions made at the time the institutional control plan was developed are valid and whether the chosen control is still protective of human health.

(4) Frequency of Inspections. When contamination is left in place and an institutional control program has been used to limit the risk, the Federal Government is required to review the remedy at least every five years. More frequent inspections may be necessary in the case of land use controls, for example, when the site is located in an area of rapid or continual development. More frequent inspections may also be required by certain statutes that may have been used as part of an institutional control program. For example, the Sikes Act which was used at Aberdeen Proving Ground, Maryland to designate two OE-contaminated sites for use as Natural Resource Management Areas, requires regular review (not less often than every five years) of the operation and effectiveness of the plan in terms of natural resource management and yearly reports on related activities. USACE districts are responsible for coordinating these inspections and reviews.

h. Appendix I contains a checklist addressing operations and maintenance issues for institutional controls.

6-5. Procedures for Modification or Termination of an Institutional Control Program.

a. Introduction. Over time, it may become necessary to modify or terminate an institutional control program. The institutional control plan should address the procedures for performing periodic reviews of the institutional control to determine the effectiveness of the institutional control program, and for making any changes that are deemed necessary.

b. Conditions for Modification of the Institutional Control.

(1) An institutional control may require modification due to changes in land use or improvements in OE detection or removal technology. Advances in detection, removal, and destruction technologies may make additional site cleanup economical and safe at some point in the future. Current technologies are limited in the extent of removal that can be achieved at a reasonable cost. Many times, the cost of ordnance removal actions exceeds the value of the real estate. With the current state of ordnance removal technologies, removal actions do not guarantee complete clearance of a site. There are currently several programs underway to identify technological improvements in OE detection and removal technologies. An example of one such program is the UXO Advanced Technology Demonstration Program established by the U.S. Army Environmental Center to evaluate and identify innovative, cost-effective, commercially available systems for the detection, identification, and removal of UXO that may improve the efficiency of removal actions in the future.

(2) Advances in OE detection and removal technology may make it possible to further characterize the distribution of OE and/or remove these items, thereby decreasing the risk of OE exposure at a site and perhaps decreasing the need for the current level of restrictions. The need for and the effectiveness of the institutional control program should then be reviewed based on the new site condition or technology.

(3) An institutional control plan may also require modification due to changes in local land use to ensure that the controls that are in place are still protective of human health and the environment.

c. Conditions for Termination of the Institutional Control. The risk from OE is long-term and OE items are expected to remain hazardous for an indefinite period of time. Although munitions components may deteriorate through weathering and corrosion to a point that the munition will not function as intended, there is no easy way to know how long this process may take, and deterioration does not necessarily mean that the munition is not hazardous. The nature of OE seems to preclude the possibility that institutional controls implemented to prevent exposure to these items can be completely eliminated, unless advances in OE detection and clearance technology make detection and removal of these items more economical, complete, and safe.

d. Legal Requirements. If an institutional control requires modification or termination, legal counsel should be consulted to determine the specific steps required (e.g., the legal steps required to remove a deed restriction).

e. Coordination among authorities, land owners, and other organizations. In considering modification or termination of an institutional control, all parties involved in the development, implementation, maintenance, etc. of the institutional control program should be consulted.

f. Funding. A source of funding should be identified in the institutional control plan to support evaluation of modification or termination. The responsibility for funding additional cleanup should also be addressed in the institutional control plan.

g. Advances in Technology. As discussed above, advances in OE detection, removal, or destruction technologies may make cleanup of OE-contaminated sites more economical, efficient, and safe. The institutional control plan should address responsibility for determining when additional cleanup activities would be conducted and who would be responsible for funding and conducting such activities.

h. Appendix J contains a checklist addressing issues related to modification and termination of institutional controls.